2016 Triennial Review

Report of Findings

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Office of Environmental Assessment
Water Planning and Assessment Division
Water Quality Standards and Assessment Section

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Executive Summary

Every three years the State of Louisiana is required by the Clean Water Act to review its surface water quality standards. The Louisiana Department of Environmental Quality began this process, called the Triennial Review, in 2016 with Potpourri Notice 1601Pot1 which was published in the *Louisiana Register* on January 20, 2016. The notice opened the comment period by requesting public comments on Chapter 11 in the Louisiana Administrative Code, Title 33, Part IX. Comments could be submitted electronically or orally at the public hearing that was held on March 30, 2016. Comments were accepted through the end of the comment period on March 30, 2016 at 4:30 p.m. Comments were also solicited from department staff.

Public and staff comments were received and summarized, and then responses were developed based on the needs of the department, resources available, staffing constraints, and time constraints. The state water quality standards have been reviewed and in conjunction with the comments, a path forward has been developed. Rulemaking will be necessary to address recommendations and issues that were identified through the 2016 Triennial Review process.

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I. Introduction

"... at least once each three year period ... hold public hearings for the purpose of reviewing applicable water quality standards and, as appropriate, modifying and adopting the standards" [Clean Water Act Section 303(c)(1)]

Every three years the state is required by the Clean Water Act (CWA) to review its surface water quality standards, and to adopt and revise, as necessary, those standards. This review process is called the "Triennial Review." Standards are established to protect the public health or welfare, enhance the quality of water and serve the purposes of the CWA. The state should take into consideration public concerns, U.S. Environmental Protection Agency (EPA) guidance, and the latest scientific knowledge. The Triennial Review (TR) provides an opportunity for the public and other interested parties to review and comment on the water quality standards and comment on priorities and commitments that the Louisiana Department of Environmental Quality (LDEQ) makes regarding the water quality standards. LDEQ has as its mission to provide service to the people of Louisiana through comprehensive environmental protection in order to promote and protect health, safety and welfare while considering sound policies regarding employment and economic development.

A Potpourri Notice for the TR was published in the January 20, 2016 edition of the *Louisiana Register*. The notice opened the comment period for the TR and comments were accepted through the close of the public comment period (4:30 p.m. on March 30, 2016). The public was invited to a public hearing on March 30, 2016 at 1:30 p.m. to submit oral comments. Additionally, notice was made to the public on the LDEQ Water Permits Division website. No oral comments were presented at the public hearing. Electronic comments were received from: GEI Consultants on behalf of the Copper Development Association; Gulf Restoration Network (GRN); Tulane Environmental Law Clinic (TELC); Lake Pontchartrain Basin Foundation; and EPA Region 6 (R6). The comments from TELC had previously been submitted in 2009 and GRN requested that those comments be reconsidered during the 2016 TR. Departmental staff comments were also received.

All comments were reviewed and summarized, and then distributed to the appropriate workgroups within the Water Permits Division for consideration. Responses to the comments and prioritization of the issues were developed. The comments, responses, and prioritizations are presented in Appendices B and C. This Report of Findings (RoF) is a representation of the comments and responses, and a plan forward as a result of the review process.

II. Water Quality Standards

Water quality standards are provisions of state or federal law which consist of (1) a designated use or uses for waters of the state, (2) water quality criteria for such waters based on such uses, and (3) an antidegradation policy. Water quality standards are to protect public health or welfare, enhance the quality of the water and serve the purposes of the Clean Water Act [as defined in sections 101(a)(2) and 303(c) of the CWA]. Water quality criteria are elements of state water quality standards which are expressed as constituent concentrations, levels, or narrative statements representing a quality of water that supports a particular use (See LAC 33:IX.1113). When criteria are met, water quality will generally protect the designated use (40 CFR 131.3).

Water quality standards (WQS) described in Chapter 11 of the Louisiana Administrative Code (LAC) Title 33, Part IX, are applicable to surface waters of the state and are used in permit processes to develop legally enforceable effluent limitations for point source discharges to surface waters of the state (see LAC 33:IX.1101.C).

Louisiana has general and numeric criteria that are described in LAC 33:IX.1113. General criteria are expressed in a narrative form and include aesthetics, color, suspended solids, taste and odor, toxic substances (in general), oil and grease, foam, nutrients, turbidity, flow, radioactive materials, and biological and aquatic community integrity. Numeric criteria are generally expressed as concentrations (weight measured per liter) or scientific units and include pH, chlorides, sulfates, total dissolved solids, dissolved oxygen, temperature, bacteria, and specific toxic substances. Toxic substances are those for which EPA has published criteria recommendations and for which states are required to adopt their own criteria.

Guidance published by the EPA recommends criteria which reflect the most current scientific information available regarding pollutant effects on human health and aquatic life. The guidance, which has no force of law, is published to assist states and Indian Tribes in setting their own water quality standards. Human health criteria provide guidelines that specify the potential risk of adverse effects to humans due to substances in the water. Aquatic life criteria are designed to protect all aquatic life, including plants and animals.

The designated uses of the waters of Louisiana consist of: Primary Contact Recreation (PCR), Secondary Contact Recreation (SCR), Fish and Wildlife Propagation (FWP), Limited Aquatic Life and Wildlife (LALW), Drinking Water Supply (DWS), Oyster Propagation (OP), Agriculture (AG), and Outstanding Natural Resource Waters (ONRW). LDEQ reports state water quality by basin subsegment. The subsegment approach divides state waters into discrete 6-digit hydrologic units in order to manage and prioritize efforts to improve water quality and to describe the subsegments hydrologically. The subsegment delineations are primarily based on natural watershed boundaries while also taking into account site-specific conditions, such as dams, levees and weirs, that require unique water quality standards and criteria. Currently there are 499 subsegments with designated uses and water quality criteria applied primarily on a subsegment-by-subsegment basis. A site-specific use attainability analysis (UAA) has been completed on each subsegment not designated as either PCR or FWP. The chart below lists the designated uses and how many subsegments currently are assigned those designated uses.

Designated Uses	PCR	SCR	FWP	LALW	DWS	OP	AG	ONRW
Number of Subsegments	477	499	493	6	35	69	76	67

III. LDEQ Review of Water Quality Standards

During 2016, LDEQ reviewed the existing WQS and identified a number of areas requiring attention. Some of the areas were suggested by LDEQ staff, and others came from the public comments, including comments received from EPA R6. Below is a listing of the major areas identified from the comments.

- Adopt the Biotic Ligand Model to calculate copper aquatic life criteria.
- Adopt numeric nutrient criteria.
- Address several issues concerning wetland assimilation areas.
- Review and revise, as necessary, the toxics.
- Review and revise, as necessary, the aquatic life criteria in Table 1 and Table 1A.
- Adopt ammonia criteria.
- Review and revise, as necessary, fecal coliform bacteria; implement federally required enterococci and *E. coli* bacterial criteria.

- Adopt selenium criteria.
- Review antidegradation policy and develop antidegradation implementation procedures.
- Correct the cadmium and lead criteria equations.
- Correct various grammar, punctuation and typographical errors in LAC 33:IX.Chapter 11.
- Review each subsegment boundary and description for consistency between Table 3 in LAC 33:IX.1123 and Volume 4 of the Water Quality Management Plan.
- Review the subsegments that have the Drinking Water Supply designated use for needed revisions.
- Develop a nomination process for ONRWs.
- Revise the regulatory UAA language.
- Review and revise definitions of PCR, SCR and limited aquatic life and wildlife use.

A summary of the comments received can be found in Appendices B and C. In 2016 LDEQ prioritized and developed a response to each comment. Based on a number of variables including, but not limited to, the needs of the department, current staffing, and available resources, LDEQ will determine which issues and revisions can be accomplished during 2017-2018. The department anticipates rulemaking in 2018. LDEQ will follow the Administrative Procedure Act (La. R.S. 49:950 et seq.) when proposing regulatory revisions to the WQS.

IV. Path Forward

After solicitation and consideration of the comments received during the TR process, the department formulated a plan for moving forward. LDEQ will develop and propose a rule to the state regulations that will likely address the following areas.

- Maintain consistency of the Louisiana WQS with federal water quality regulations established in accordance with section 304(a) of the Clean Water Act.
- Review and revise, as necessary, the toxics criteria.
- Evaluate the need for criteria for selenium and ammonia, and the use of the copper BLM.
- Make editorial changes to improve clarity in the state's water quality regulations.
- Review and revise, as necessary, subsegment boundaries and/or descriptions.
- Revise the Water Quality Management Plan, Volume 3, Section 10, *Wetland Assimilation*.
- Review and revise, as necessary, subsegments with Drinking Water Supply designated use.

Additionally, LDEQ will:

- continue to pursue antidegradation implementation provisions through the established antidegradation implementation workgroup;
- continue to pursue nutrient criteria or translators development;
- continue to pursue appropriate inland and coastal dissolved oxygen criteria; and
- continue development of a nomination process for ONRWs.

LDEQ will follow the state Administrative Procedure Act when proposing any regulatory revisions to address the topics identified above. Other topics may be included in the proposed WQS regulatory revision if time permits and sufficient information is available to support a revision. LDEQ anticipates bringing these revisions to the public early in 2018. Other concerns raised during this review process may be pursued as separate tasks, as noted in the LDEQ responses to the comments.

V. Conclusion

LDEQ has completed the 2016 TR of Louisiana's WQS. Necessary regulatory revisions to the WQS have been identified and rule development has begun. The department anticipates entering into the formal rulemaking process in early 2018.

VI. Appendices

Appendix A

POTPOURRI

Department of Environmental Quality
Office of Environmental Services
Water Permits Division

Notice of Public Hearing and Request for Comments to Initiate
Triennial Review of Louisiana Water Quality Standards

In accordance with section 303(c)(1) of the federal Clean Water Act, the Louisiana Department of Environmental Quality hereby gives notice of its intent to initiate a triennial review of Louisiana's Water Quality Standards (WQS), which can be found in LAC 33:IX.Chapter 11. This review is being conducted to evaluate the need to update or revise the WQS in order to remain consistent with state and federal law. The review will also ensure that Louisiana's WQS continue to reflect the best available science and support sound water quality management policies to improve and protect the water resources of the state. This is a preliminary step in the review and potential rulemaking process. Official rulemaking, if necessary, will be initiated after review and consideration of the comments received. (1601Pot1)

With this notice, the department is soliciting comments from interested parties, including members of the public, on any aspect of the WQS that the department should consider for potential revision. Persons commenting should reference this potpourri notice, 1601Pot1. A public hearing will be held on March 30, 2016, at 1:30 p.m. in the Galvez Building, Oliver Pollock Conference Room, 602 N. Fifth Street, Baton Rouge, LA 70802. Interested persons are invited to attend the public hearing and submit oral comments on any aspect of the WQS they would like the department to consider. Interested persons may also submit written comments through postal mail or e-mail. Comments should include the name of the commenter and the organization which they represent, if appropriate. Comments are due no later than 4:30 p.m., March 30, 2016. Written comments may be sent through postal mail to Sandy Stephens, Department of Environmental Quality, Office of Environmental Services, Water Permits Division, P.O. Box 4314, Baton Rouge, LA 70821-4314. Electronic comments may be submitted via e-mail to wq.standards@la.gov.

Written responses to the comments will not be provided. Progress on the triennial review will be communicated to the public through the Water Permits Division, Water Quality Standards and Assessment webpage, (http://www.deq.louisiana.gov/portal/DIVISIONS/WaterPermits/WaterQualityStandardsAssessment.aspx). Any proposed revisions to the WQS resulting from the review will be subject to the rulemaking provisions of the Administrative Procedure Act, R.S. 49:950 et seq.

Herman Robinson
General Counsel

Appendix B

2016 TRIENNIAL REVIEW PUBLIC COMMENTS			
Comment Number	**Comment**	**Priority**	**LDEQ Response**
Comment 1 GEI Consultants on behalf of the Copper Development Association (CDA)	The commenter encourages LDEQ to consider updating standards to allow the use of Biotic Ligand Model (BLM) to calculate aquatic life criteria for copper, as currently recommended by USEPA. The following addition is suggested. Add a new footnote to the acute and chronic copper aquatic life criteria entries in Table 1A Numerical Criteria for Metals and Inorganics that would state: "Freshwater copper criteria may be calculated utilizing the procedures identified in EPA's Aquatic Life Ambient Freshwater Quality Criteria - Copper (2007), EPA-822-R-07-001." Louisiana's current aquatic life criteria take only hardness into account as a factor that modifies toxicity. Using only hardness as a modifying factor for metals criteria is an outdated approach that excludes a substantial body of peer-reviewed scientific literature demonstrating that additional modifying factors can and should be incorporated into regulatory benchmarks or standards, while providing the same levels of aquatic life protection required under the Clean Water Act (USEPA 1985, 1994, 2001, 2007). Like most metals, copper toxicity is a function of its bioavailability, which in addition to being controlled by hardness, is also strongly related to other important factors such as dissolved organic carbon (DOC), alkalinity, pH, and temperature. The key strength of the BLM is that it accounts for multiple factors—in addition to hardness—that mitigate or exacerbate copper's toxic effect on aquatic life. And in addition to the freshwater copper BLM, a saltwater BLM has also been developed which leverages the significant amount of research on the effects of copper to saltwater organisms that has been done since the 1985 revision of the criteria document and is currently being reviewed by the USEPA. Similar to copper, BLMs have been developed, validated, and are available for regulatory use for several other metals, including zinc, lead, nickel, and	High Priority	LDEQ is considering the use of the Biotic Ligand Model to calculate aquatic life criteria for copper. However, it would be a major project involving personnel, training, parameter considerations, assessment implications, etc. At this time, the department will designate this as a high priority for consideration.

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	cadmium. While EPA has yet to develop formal recommended national ambient water quality criteria using BLMs for these other metals, the models are widely available (e.g., for zinc BLM-based criteria, see DeForest and Van Genderen 2012) and are being applied in regulatory programs in several European countries. CDA fully supports and shares their desire to move towards bioavailability models, such as the BLM, as being the current state of both scientific and regulatory practice. There also are practical advantages for using the BLM; it is a cost effective regulatory tool compared to other site-specific toxicity test procedures (e.g., water-effect ratios), and the BLM software is publicly available, sanctioned by USEPA, and requires only brief training to generate rapid and useable output. While the model is widely considered to be useful for derivation of site-specific water quality criteria, we suggest its best application is on a state-wide basis for any discharger with sufficient water quality data to run the BLM. This would enable individual permit writers and permittees to collaborate directly to use the BLM to derive permit limits, thereby minimizing or eliminating the need to go through a lengthy and expensive rulemaking process. BLM-based criteria provide a practical means of deriving demonstrably more accurate levels of aquatic life protection across a broad range of water quality conditions, and with sufficient flexibility to support almost any regulatory application framework.		
Comment 2 Gulf Restoration Network (GRN)	Tulane Environmental Law Clinic (TELC) submitted comments, in response to 0907Pot1, on behalf of GRN on 9/2/2009 (2009 letter). The concerns stated in the 2009 letter are still relevant and LDEQ is asked to consider those issues during the current Triennial Review.	No priority ranking necessary	The previously submitted TELC comments have been included in this Triennial Review.
Comment 3 GRN	None of the initiatives by EPA and LDEQ regarding nutrients have resulted in any numeric nutrient criteria. Louisiana has accomplished a few of the recommended elements outlined in a 3/16/2011 EPA memo. However, LDEQ has not accomplished the final element that recommends states develop numeric nitrogen and phosphorus criteria for at least one class of waters, within the state, within 3-5 years. It has been almost 5 years and this Triennial Review would be an appropriate time to release these criteria. Furthermore, in 2006 Louisiana developed a document which put forward	High Priority	The department has an active nutrient criteria project in progress. Through the support of EPA, LDEQ has performed data collection efforts in inland ecoregions in rivers and streams through a reference stream approach to document observed nutrient characteristics in least-impacted

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	dates upon which nitrogen and phosphorus criteria would be developed. These dates have not been met, despite Louisiana apparently working on numeric nutrient criteria as evidenced by an update given by LDEQ to the Gulf of Mexico Alliance on 11/10/2009 where LDEQ showed draft ranges for nutrient criteria. GRN hopes that LDEQ will include nutrient criteria in this Triennial Review.		reference streams. LDEQ has also performed a nutrient gradient study in inland rivers and streams to aid in determining if relationships exist with nutrient water quality and biological response variables. LDEQ aims to further advance the nutrient criteria effort through consideration of nutrient translators of the narrative nutrient criteria with consideration of water body type and other variables. Nutrient criteria development is a complex issue and nutrient criteria may not be ready for rulemaking during this Triennial Review.
Comment 4 GRN	Updated Wetland Assimilation Rules. In addition to comments submitted in the TELC 2009 letter, monitoring locations should be addressed. Currently, the discharger must have near, mid, and far monitoring sites. Many times these sites are not actually equally spaced in the assimilation area and are often on the edges. They are also not based on the flow of the effluent, but seem to be based on accessibility. Only having 3 monitoring sites does not give a good picture of the health of the wetland, especially if these sites are not located in well-justified locations.	High Priority	For wetland assimilation monitoring sites, accessibility plays a role in determining the locations of the Near, Mid, and Out sites which must be within the flow path. Most recent Louisiana Pollutant Discharge Elimination System (LPDES) permits require that "water quality will be monitored by taking water samples from the monitoring sites along the path of flow of the effluent in the Wetlands Areas." Additionally, LDEQ has a wetland assimilation workgroup currently reviewing the wetland assimilation program. The workgroup will review the topics, and any needed updates may result in revision to the wetland assimilation regulations, revision to Volume 3 of the Water

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			Quality Management Plan, or both.
Comment 5 From TELC, submitted 9/21/2009	LDEQ's Triennial Review Must Adopt Water Quality Criteria Equal To or More Stringent Than Federal Criteria for All Pollutants. Louisiana's current regulations are unlawful because they do not adequately protect the designated uses of state water bodies. Federal law requires that Louisiana establish criteria sufficient to protect the designated uses of the water body. The criteria must be based on sound scientific rationale and contain sufficient parameters or constituents to protect the designated use. Currently, numeric criteria fail to provide protections equal to the federal numeric criteria for 55 pollutants, including 40 pollutants for which Louisiana has failed to establish any numeric criteria at all. [See Subra, W., *Industrial Facilities Releasing Pollutants into the Surface Water Resources of the State of Louisiana - Pollutants That Are Not Covered by State Water Quality Criteria or Have State Water Quality Criteria Higher than Corresponding US EPA Criteria* (2009), p. 2-3 ("Subra Report" attached as Exhibit A)]. The Subra Report also describes some of the facilities discharging such pollutants, demonstrating the need for Louisiana to adopt scientifically sound numeric criteria for these pollutants. The report also lists the water body each facility discharges into. Table 3 lists the specific pollutants lacking Louisiana numeric criteria and the industrial facilities discharging each such pollutant. Failing to adopt criteria for known pollutants that are discharged into state waters does not protect the designated uses of those waters. Therefore, Louisiana's current regulations under LAC 33:IX.1113 are unlawful because they omit criteria necessary to protect the designated uses of state water bodies. LDEQ is urged to adopt numeric criteria for all pollutants with federal numeric criteria at levels equal to or more stringent than the federal numeric criteria maximum allowable levels. If LDEQ does not adopt numeric criteria equivalent to federal criteria for each pollutant, LDEQ is requested to furnish an explanation, including the sound scientific basis, for the department's decision with respect to each pollutant.	High Priority	In accordance with the Clean Water Act (CWA) the department is currently reviewing and will revise as necessary the toxic pollutants listed in Table 1 of Section 1113.
Comment 6 From TELC, submitted	LDEQ's Triennial Review Must Adopt Numeric Criteria for Nutrients. Establishing numeric criteria for nutrients is necessary to protect designated uses of water bodies and to prevent health hazards. Nutrients, such as	High Priority	See Response to Comment 3.

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9/21/2009	nitrogen and phosphorous, come from many sources, including fertilizers, erosion, and sewage. Nutrient pollution causes harmful algal blooms, reduced spawning grounds, fish kills, oxygen-starved zones, "and public health concerns related to impaired drinking water sources and increased exposure to toxic microbes such as cyanobacteria. The effects are especially acute in Louisiana. Nutrient pollution creates a "dead zone" in the Gulf of Mexico each year where aquatic plant and wildlife cannot survive due to lack of oxygen. This has a detrimental effect on Louisiana's commercial fishing industry. Therefore Louisiana has a strong interest to set numeric criteria to protect its industry. Also, LDEQ acknowledged its own need for numeric nutrient criteria to combat the "dead zone" when it noted that it could not list nutrients as "suspected causes of impairment due to the lack of criteria for these parameters. Setting nutrient criteria would also set a model for those upstream states contributing the bulk of nutrient pollution to the Gulf and empower Louisiana to enforce its criteria on upstream states causing or contributing to water quality impairment in Louisiana. EPA guidance calls for states to adopt numeric criteria for nutrients that include nitrogen, phosphorous, chlorophyll-a, and transparency due to the interrelationships between those parameters. This Triennial Review is Louisiana's opportunity to set its own numeric criteria rather than have EPA set it for the state. If LDEQ decides not to establish numeric criteria for nutrients, LDEQ is requested to provide an explanation for its decision.		
Comment 7 From TELC, submitted 9/21/2009	LDEQ's Triennial Review Must Adopt Numeric Criteria for Ammonia. LDEQ must establish numeric criteria for ammonia in state waters to protect the designated uses, particularly the fish, wildlife, and oyster propagation uses. EPA guidance states that controlling discharges through numeric ambient water quality criteria for ammonia "is necessary to protect aquatic life uses of surface water across the US." EPA guidance recommends that the numeric criteria tables for ammonia reflect water and aquatic life conditions that affect ammonia toxicity values, such as the presence of early life stages of fish, and changes in temperature and pH. EPA guidance also provides tables of criteria for both acute and chronic levels of toxicity. LDEQ cannot adequately protect the designated uses without ammonia criteria. Ammonia is a toxic pollutant harmful to fish and wildlife, and is	High Priority	The development and adoption of numeric ammonia criteria is under discussion.

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	routinely found in wastewater effluent and landfill and agriculture runoff, and is one of the most commonly discharged pollutants nationwide. EPA has already provided year-round recommended criteria for all waters "designated for the protection of aquatic life or whose existing uses include aquatic life" that are based on sound scientific rationale. LDEQ is urged to adopt the EPA recommended criteria parameters for ambient ammonia and if not, LDEQ is requested to explain its decision.		
Comment 8.A From TELC, submitted 9/21/2009	LDEQ Must Establish More Stringent Criteria for Fecal Coliform. Louisiana's current fecal coliform criteria are inadequate to protect the designated uses of waters and the public from bacterial pathogens in recreational use waters. Federal criteria include daily maximum and 30-day chronic criteria maximums to protect primary and secondary contact recreation uses. Louisiana lists no chronic maximum criteria in LAC 33:IX.1113.C.5. Even though LDEQ's maximum allowable fecal coliform density for primary contact recreation use is the same as the federal 400/100 mL allowance, Louisiana allows the water quality to exceed that maximum two and a half times more frequently (25% of monthly samples) than the federal standards (10% of monthly samples) before classifying these waters as impaired. Allowing high levels of contamination for extended periods before considering a water body impaired does not adequately protect its designated use. Increased exposure to fecal bacteria through contamination in recreation waters can lead to greater ease and frequency of contracting serious, even fatal illness caused by bacterial pathogens. To protect the public and protect and maintain the designated use of recreation waters, LDEQ should adopt chronic criteria and frequency standards to match federal standards. LDEQ is requested to provide an explanation, including a sound scientific basis, if LDEQ does not establish chronic criteria and adopt more stringent frequency standards.	No priority ranking necessary	LDEQ updated the recreational water quality criteria on May 20, 2016. During the public comment period no comments were received. Chronic criteria are appropriate for toxic substances and metals, not for bacterial indicators of fecal contamination.
Comment 8.B From TELC, submitted 9/21/2009	LDEQ Must Modify Its Seasonal Criteria for Bacteria To Appropriately Reflect Actual Use of Waters in Louisiana. Louisiana's regulations fail to protect designated and existing uses when they treat primary contact recreation water bodies using secondary contact recreation criteria for six months of the year, from November through April. Primary contact recreation is a designated use for activities that involve or	Low Priority	The seasonal periods for primary and secondary contact recreation in the water quality standards are justified and protective of human health. As stated in LDEQ regulations, secondary contact recreation is water contact use in which

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	require prolonged body contact with the water. LDEQ has justified applying less stringent secondary contact criteria during those six months because "temperatures during the November to April time period averaged below 20 degrees Centigrade or 68 degrees Fahrenheit." Apparently, LDEQ is asserting that no primary contact recreation occurs in Louisiana state waters in April or any other month between November and March. However, this justification fails. Data from the National Oceanographic Data Center and Louisiana public records show average temperatures over several years for popular recreational destinations at or above 70 degrees in April and November, an acceptable temperature range for primary contact recreational water activities. LDEQ contends that "swimming at these temperatures exposes one to the serious consequences of hypothermia." Also, LDEQ's statement concerning the November through April average temperatures and the potential effects on people in water is misleading because it is an average of the temperatures over six months, i.e., it assigns a conclusion about April temperatures based on January information. Monthly averages during a six month time period vary widely. LDEQ could apply the same rationale to find that primary contact recreation standards should apply year round because the average temperature of all 12 months at Grand Isle, Louisiana, for example, is approximately 73.5 degrees Fahrenheit. The monthly average at Grand Isle, Louisiana, is 70 degrees Fahrenheit for both April and November. To properly maintain and protect the existing and designated uses and to protect the public, LDEQ should extend the period of primary contact recreation standards to include the entire year, or at the very least April and November. LDEQ is requested to provide an explanation, including a sound scientific basis, if LDEQ decides to not modify its seasonal criteria for primary contact recreation.		body contact with the water is either incidental or accidental and the probability of ingesting appreciable amounts of water is minimal. This is appropriate for the non-recreational period of November 1 through April 30. Prior to the promulgation of the seasonal criteria, a review of ambient temperature data for popular recreational water bodies across the state was performed, with 20° C (70° F) as the benchmark starting and ending temperature for swimming activities. A six month period from May 1 through October 30 corresponds with this temperature range and also includes the first and last major weekend holidays of the year (Memorial Day and Labor Day). Secondary contact recreation criteria will adequately protect individuals from inadvertent contact with the water.
Comment 8.C From TELC, submitted 9/21/2009	LDEQ Must Implement Federally Required Enterococci and E. coli Bacterial Criteria. LDEQ must implement enterococci and E. coli as its bacterial pathogen indicator, which is required by federal regulations. Under the Clean Water Act, the criteria for water quality must accurately reflect the latest scientific knowledge [33 U.S.C. 1313, §304(a)(1)]. The latest scientific knowledge has established enterococci and E. coli as superior bacterial indicators. On	No priority ranking necessary	See Response to Comment 8.A.

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	November 16, 2004, EPA published a final rule that promulgated water quality standards for 21 states and territories, including Louisiana, that had not yet adopted the water quality criteria for bacteria that were as protective of human health as EPA's 1986 bacteria criteria, as required under section 303(i)(1)(A) of the CWA (also known as the BEACH Act of 2000). LDEQ currently uses fecal coliform as its bacterial indicator instead of enterococci and E. coli, and LDEQ has not yet adopted any criteria for these required bacterial indicators for coastal waters. In 2006, LDEQ justified its failure to revise its bacterial indicator criteria, saying it lacked "data specific to Louisiana waters for E. coli and enterococci" and their comparability with fecal coliform as indicators in Louisiana waters. This justification no longer applies. Non-compliance with federal regulations puts Louisiana citizens at risk of coming into contact with harmful pathogens that cannot be adequately detected by fecal coliform indicators. Should LDEQ decide not to adopt enterococci and E. coli criteria as bacterial indicators, LDEQ is requested to provide an explanation, including a sound scientific basis.		
Comment 9.A From TELC, submitted 9/21/2009	LDEQ Must Adopt Numeric Criteria for Dissolved Oxygen in Wetland Assimilation Sites. LDEQ must establish numeric criteria for dissolved oxygen (DO) in wetland assimilation sites to protect their designated uses and the aquatic life that inhabits them. For wetlands classified as "secondary contact recreation and fish and wildlife propagation," low levels of DO will result in the loss of the fish and wildlife the designated use sets out to protect. Furthermore, DO is an indicator for high levels of nutrients in the water and high levels of nutrients decrease the level of DO. Since Louisiana does not have numeric standards for nutrients, monitoring DO levels is important to protect plants and wildlife in wetlands. LDEQ regulations specifically omit DO criteria protection for wetland assimilation sites. It is unreasonable to assert that DO criteria are necessary to protect fish and wildlife in some waters where they are present, but not in others. Fish and wildlife need DO and DO protection in all waters. EPA lists DO as one of the numeric criteria necessary to protect aquatic life. Louisiana's failure to set DO criteria for wetland assimilation sites is unlawful because DO criteria are necessary to protect such a wetland's designated uses and to comply with federal law. LDEQ	High Priority	Wetland areas can periodically experience anoxic or anaerobic conditions or even experience a lack of water altogether. Thus wetland areas may undergo periods of low dissolved oxygen due to the natural anoxic/anaerobic characteristics of such areas. The Use Attainability Analyses (UAAs) that provide the foundation for the wetland assimilation program and the subsequent regulation revisions and WQMP updates, that do not outline DO criteria for wetland assimilation areas, were thoroughly vetted through public review processes, and further, extensively reviewed and approved by EPA.

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	should establish a minimum or, at least, an average DO numeric criterion for wetland assimilation sites. Generally, the criterion for successful attainment of water quality goals for DO is 5mgl-l. Since background DO levels vary depending on the conditions of each wetland, a scientifically based average numeric criterion for DO in assimilation sites might be appropriate. An explanation is requested if LDEQ decides not to establish numeric criteria for DO for wetland assimilation sites.		
Comment 9.B From TELC, submitted 9/21/2009	LDEQ Must Require Applicants to Perform a Hydrologic Study of the flow of the Treated Wastewater. To protect the designated uses of the wetlands, applicants should be required to perform a hydrologic study of the flow of the treated wastewater. Flow of the treated wastewater should also be monitored after the permit is granted to ensure compliance. Monitoring will ensure the protection of the designated uses not only of assimilation sites, but also of the wetlands surrounding them. Adequate flow studies, monitoring, and enforcement will prevent the deterioration of assimilation sites. These studies could be used to identify potential short-circuiting of the wetlands. If any short-circuiting has the potential to happen, the assessed wetlands should not be used for wastewater assimilation.	High Priority	LDEQ considers that adequate hydrologic (flow) studies are necessary to document actual flow conditions within the wetland assimilation area once effluent addition is initiated. LDEQ has begun including requirements for an Adaptive Management Plan within the LPDES permit program. This Adaptive Management Plan includes a discharge distribution plan, dye studies, use of water control structures, etc. to ensure the permittee is appropriately monitoring, evaluating the monitoring results, and adapting the management plan, as necessary, to actual flow conditions within the wetland assimilation area.
Comment 9.C From TELC, submitted 9/21/2009	LDEQ Must Require Applicants to Perform Mineral Studies at Proposed Assimilation Sites. Mineral soils are better suited for assimilation of nutrients than organic soils. Basing assimilation sites on mineral and soil studies will ensure the soils are most suitable to nutrient intake, thereby minimizing nutrient pollution's adverse effects and protecting the wetlands' designated uses.	High Priority	LDEQ has a wetland assimilation workgroup currently reviewing the wetland assimilation program. The workgroup will review the topics, and any necessary updates may result in revision to the wetland assimilation regulations, Volume 3 of the Water Quality Management Plan, or to both.
Comment 9.D	LDEQ Must Establish Stricter Standards for Monitoring of Wetland	High Priority	Regarding dissolved oxygen, see

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From TELC, submitted 9/21/2009	Assimilation Sites. To protect the wetlands and their designated uses, LDEQ must establish stricter standards for monitoring assimilation sites. LDEQ must impose stricter standards on DO and pollutants that wastewater treatment facilities are likely to discharge (e.g., ammonia and other nutrients). LDEQ should monitor below-ground vegetation to properly assess the health of assimilated wetlands. This is necessary to determine the effect of nutrient-rich effluents on the vegetation roots. LDEQ should require monitoring of below-ground growth as compared to a reference site to assess the health of assimilation sites and ensure protection of the designated uses. LDEQ should lower the amount of acceptable vegetation loss for wetland assimilation sites. Allowing a 20% loss of vegetation at assimilation sites, compared to reference sites, fails to adequately protect the health and designated uses of wetlands. Therefore the recommendation to LDEQ is to adopt a more stringent parameter that will ensure the protection of vegetation at assimilation sites. LDEQ needs to establish stricter criteria for heavy metals at assimilation sites. Currently, LDEQ requires the monitoring of metals from sediment samples, plant tissue, and water from wetland assimilation sites. However, this monitoring has not been sufficient to ensure that the designated uses of the wetlands are protected. An example of why stricter parameters for heavy metals are needed is the South Slough assimilation site in Hammond, La. The frequent discharge of copper, zinc, and even mercury at this site, among other factors, may have contributed to the break-up of the wetland during 2008-2009. To prevent similar damage to other wetlands, LDEQ should establish criteria and monitoring requirements for heavy metals at assimilation sites sufficient to protect the wetlands and their designated uses. Should LDEQ decide not to adopt these recommendations for wetland assimilation sites, LDEQ is requested to provide an explanation for its decision pursuant to 40 CFR 131.11(A)(1).		Response to Comment 9.A. For other pollutants, see Response to Comment 9.C. Regarding belowground vegetation, LDEQ is not aware of a standard measure for belowground productivity. Furthermore, belowground productivity is difficult to measure, is extremely variable depending on the time of year and species present, and separating live from dead material is extremely difficult due to the highly organic nature of most wetland soils (Cronk and Fennessy, 2001). Cronk, J.K. and M.S. Fennessy, 2001. Wetland Plants: Biology and Ecology, CRC Press, Boca Raton, FL. Due to the variability inherent in natural systems, the margins of error expected in sampling methods and in statistical comparisons, 20 percent is the best resolution at which differences in productivity between the discharge area and the reference area can be confirmed, and therefore attributed to impacts from the wastewater (EDMS Doc ID 10005744). Regarding metals, LDEQ requires the monitoring of metals in the discharge (annually), as well as the sediment,

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			water, and vegetation (every 5 years) within the assimilation wetland. As metals tend to accumulate in wetlands due to wetlands' anaerobic nature, long-term monitoring of the sediment and vegetation will provide LDEQ with a record of metal accumulation throughout time. If the metal concentration appears to be increasing to a level of concern, LDEQ will work with the facility to address the problem. Additionally, all major facilities (equal to or greater than 1 MGD) must submit a water quality screening of all the state's listed priority pollutants. This screen is utilized to determine if a reasonable potential exists to violate an existing water quality standard. If a reasonable potential is found, effluent limitations for those particular parameters are included in the permit.
Comment 10 From TELC, submitted 9/21/2009	LDEQ's Triennial Review Must Revise LDEQ's Antidegradation Policy and Implementation Provisions. Louisiana's current antidegradation provisions are not consistent with the federal antidegradation requirements. They include less stringent policy and omit substantial implementation procedures. The Louisiana antidegradation provisions are confusing and even misleading about antidegradation. LDEQ is urged to make its regulations lawful and avoid unnecessary confusion by adopting the language and organization of 40 CFR 131.12(a) as its antidegradation policy. LDEQ is also urged to adopt comprehensive and enforceable implementation procedures.	High Priority	An antidegradation implementation workgroup is actively working on an implementation plan which will be public noticed and will become a volume of the Water Quality Management Plan. Additional new regulations and/or revisions to existing regulations are also being examined as a part of this process.
Comment 10.A.1 From TELC,	LDEQ's Regulations Are Not Clear or Consistent with Federal Requirements for Tier 1 Policy and Implementation Procedures.	High Priority	See Response to Comment 10.

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submitted 9/21/2009	LDEQ must clarify its Tier 1 antidegradation policy. LDEQ's "Antidegradation Policy" at LAC 33:IX.1109.A does not include a statement that corresponds with the federal requirement that "existing instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected." LDEQ does state that it will "ensure" that point and nonpoint source discharges "will not interfere with or become injurious to existing uses," which may be consistent with the federal requirement to "maintain and protect" existing instream uses. However, LAC 33:IX.1119 concerns antidegradation implementation procedures and is a misleading place to describe policy. The statement does not explain how it will implement LDEQ's policy to ensure protection for existing uses, exemplifying why "ensuring" no interference or injury is a policy and not an implementation procedure. Therefore, LDEQ should clarify its regulations by a) moving its Tier 1 antidegradation policy statement to LAC 33:IX.1109, b) revising its Tier 1 antidegradation policy statement to mirror or clearly confirm with the federal policy to maintain and protect all existing instream uses.		
Comment 10.A.2 From TELC, submitted 9/21/2009	LDEQ must include Tier 1 implementation procedures. Louisiana's regulations lack any implementation procedure for the federal Tier 1 policy to maintain and protect existing instream uses. Instead, LDEQ relies generally on a Water Quality Management Process that includes: a) existing discharge permit program, b) water quality standards program, c) water quality monitoring program, and d) enforcement activities, as the mechanism to implement the antidegradation policy. These programs fail to implement Tier 1 antidegradation policy because they protect designated uses, not existing uses. In order to comply with federal law, Louisiana's regulations must delineate a mechanism by which they will ensure that existing uses are maintained and protected.	High Priority	See Response to Comment 10.
Comment 10.B.1 From TELC, submitted 9/21/2009	LDEQ's Regulations Are Not Consistent with Federal Requirements for Tier 2 Policy and Implementation Procedures. LDEQ must revise its Tier 2 antidegradation policy to be consistent with federal requirements.	High Priority	See Response to Comment 10.

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	Louisiana's regulations do not meet the federal requirements for Tier 2 waters because they lower the hurdles to allow degradation of Tier 2 waters. The current regulations adopt a lower standard, allowing degradation of such high quality waters "to accommodate *justifiable* economic and/or social development in the areas in which the waters are located." The regulations current standard is less protective than the federal requirement because it omits the requirement that lowering water quality must be "necessary." The regulations inappropriately substitute the word "justifiable" for "important." These words do not share the same meaning and should not be used as synonyms for one another. The term "justifiable" is vague and generally requires a separate standard by which to justify, which LDEQ has not included in its regulations. The current state policy is less protective than the federal requirement because LAC 33:IX.1109 provides that LDEQ may "choose" to allow lower water quality. EPA's language properly emphasizes protection by stating that high quality waters "shall be maintained and protected" and only allowing degradation as a less preferred alternative when, after full public and intergovernmental participation, the state finds it "necessary." The policy is misleading because the regulations state that the "state may choose to allow lower water quality" without noting that such discretion is available only after "full satisfaction of intergovernmental coordination and public participation provisions." LDEQ's current policy is deficient because it fails to include the federal requirement that, in the event that a state finds it necessary to degrade high quality waters, the state must assure that the highest statutory and regulatory requirements for all new and existing point sources be achieved and that best management practices be put in place for nonpoint sources. LDEQ omits this critical language altogether. Therefore, to comply with federal regulations, LDEQ must change language in LAC 33:IX.1109.A.1 to better reflect or mirror the requirements of 40 CFR 131.12(a)(2). The state must change "justifiable" to "important." The		

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	regulations must eliminate "choose to" and add "necessary." LDEQ must include the limiter of public participation and intergovernmental coordination. LDEQ must add a section to assure the highest protections when it allows lower water quality for Tier 2 waters. It would be helpful if LDEQ would specify its Tier 2 policy, as well as its Tier 1 and Tier 3 policies (i.e., title them appropriately) so as to avoid unnecessary confusion.		
Comment 10.B.2 From TELC, submitted 9/21/2009	LDEQ must include a Tier 2 implementation procedure. The current state regulations do not include a sufficient Tier 2 implementation procedure. The regulations do not include requirements which LDEQ or permit applicants must follow to meet the Tier 2 policy goals. Where current implementation procedures may be interpreted to concern Tier 2 requirements, those procedures are inconsistent with the federal antidegradation policy. The federal regulations require public participation on the issue of whether "allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located. State regulations provide that public notice is sufficient if it includes "notice of the possible lowering of water quality" and "location load proposed in the discharge permit." Such notice provides no information on "important economic or social development" or about whether the lowering of water quality is necessary. Louisiana's public notice requirements are insufficient to meet the federal antidegradation requirements. The language of LAC 33:IX.1119.C implements the opposite of antidegradation policy. The first specifically listed implementation procedure states: "If either the criteria or uses cannot be attained, then a use attainability analysis will be conducted." This implementation procedure provides an avenue to allow degradation of water quality to levels even below Tier 1 requirements. In addition to being antithetical to antidegradation policy, this language is confusing because LDEQ fails to specifically limit it to Tier 1 waters.	High Priority	See Response to Comment 10.
Comment 10.C From TELC, submitted	Tier 3 protections lack a mechanism for nominating a water body as an Outstanding Natural Resource Water Body. The language in LAC 33:IX.1119.C.4 includes an ambiguous word,	High Priority	The language in LAC 33:IX.1119.C.4 has since been revised in rule WQ088. Additionally, a procedure for the

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9/21/2009	"existing". If "existing" means "at existing levels," then the phrase is proper. However, if "existing" has some other meaning, then it would run afoul of the required Tier 3 protection promulgated by EPA (40 CFR 131.12(a)(3). This ambiguity should be clarified by revising the last sentence of LAC 33:IX.1119.C.4 to read: "Existing discharges of treated sanitary wastewater may be allowed at existing levels if no reasonable alternative discharge location is available ... ." Tier 3 protections lack a mechanism for nominating a water body as an "outstanding natural resource water body" under these provisions. LDEQ should provide for such a mechanism. For example, Kentucky's procedures include both an automatic inclusion provision and a permissible consideration provision. LDEQ must also allow inclusion of ONRWs under a permissible consideration provision. Also, LDEQ must include a provision detailing who may nominate and propose additions and how the determination of designation is made. Again, Kentucky provides an example. LDEQ should adopt similar provisions for redesignating Louisiana waters as ONRWs.		nomination of a water body as an outstanding natural resource water is in development.
Comment 10.D From TELC, submitted 9/21/2009	LDEQ must remove "Use Attainability Analysis" references from the antidegradation provisions to promote clarity and conform to federal law. The current state regulations are confusing and misleading in their overuse of the term "Use Attainability Analysis" ("UAA"). EPA provides that UAAs are the mechanism by which a state can remove a designated use which cannot be attained for one of several enumerated reasons. Federal regulations do not incorporate UAAs into its antidegradation provisions. However, in LAC 33:IX.1119.C.1, in the antidegradation "implementation" provisions UAAs can be used if either the criteria or the uses cannot be attained. A UAA does not implement antidegradation policy. The purpose of antidegradation is to protect and maintain water quality. UAAs, however, are used to determine whether the state may allow lower water quality by removing or refining a designated use. Providing for UAAs as part of the antidegradation review is misleading to agencies, facilities, and individuals	High Priority	Revisions were made to Section 1119 in rule WQ088. However, this comment will be taken into consideration during the subsequent rulemaking. In August 2015 the USEPA published the final rule, "Water Quality Standards Regulatory Revisions," that revised six program areas to improve WQS regulations effectiveness, increase transparency, and enhance opportunities for meaningful public engagement at the state, tribal, and local levels. The department will revise the regulations to maintain compatibility with the federal regulations, paying particular attention

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	about the nature of antidegradation. Listing a UAA as the first point of specific antidegradation implementation suggests that antidegradation implementation is about removing rather than protecting a designated use. Also, providing for a UAA in antidegradation provisions is confusing and misleading because LDEQ has not expressly enumerated the separate tiers of antidegradation protection. For example, a UAA could not apply to Tier 2 protected waters because, by definition, those high quality waters are in attainment of the designated use and are cleaner than the maximum pollution levels allowed. Providing for a UAA in the antidegradation implementation provisions is contrary to federal antidegradation policy, confusing, and misleading about the nature of antidegradation. Additionally, the UAA provision in the antidegradation implementation procedures is unnecessary because the same provision is already and more appropriately included at LAC 33:IX.1109.B.3. Therefore, LDEQ should delete the language in LAC 33:IX.1119.C.1.		to the 2015 revised federal regulations.
Comment 11.A From TELC, submitted 9/21/2009	LDEQ's Triennial Review Must Revise Other Provisions of Chapter 11 that Are Inconsistent or Unclear. The Use Attainability Analysis definition erroneously neglects to require assessment of whether the deficiencies in the water body being studied can be remedied. LDEQ modeled its description of the use attainability analysis after the description issued by the EPA. Unfortunately, both versions miss the mark of what Congress intended when it stated that the goals of the Clean Water Act are to "restore and maintain" the integrity of the waters. EPA's regulations recognize that when designated uses are not being attained, the analysis required to change the designated use must not only identify the factors affecting the nonattainment, but must also "demonstrate that attaining the designated use is not feasible. Both LDEQ's and EPA's definition of use attainability analysis neglects to require a demonstration of infeasibility and is therefore invalid. Merely stating the sources without analyzing what can be done defeats the broader purpose of the analysis,	High Priority	The department will take this into consideration during subsequent rulemaking. In August 2015 the USEPA published the final rule, "Water Quality Standards Regulatory Revisions," that revised six program areas to improve WQS regulations effectiveness, increase transparency, and enhance opportunities for meaningful public engagement at the state, tribal and local levels. The department will revise the state regulations to maintain compatibility with the federal regulations, paying particular attention to the 2015 revised federal regulations.

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	attaining and maintaining healthy water bodies.		
Comment 11.B From TELC, submitted 9/21/2009	The language of Section 1109(C)(1)(B) is inconsistent with the proposed regulations and undermined by its own language. The language in LAC 33:IX.1109.C.1.b is inconsistent with the definition in the regulations in Section 1105. To remedy the inconsistent language, the phrase "water levels that preclude primary contact recreation" should be removed. Even if LDEQ does not recognize the inconsistency of §1109.C.1 with the definition, it must still be revised because the first sentence in §1109.C.1.b essentially establishes a three part test that defines an intermittent stream. "An intermittent stream is defined as a water body in which natural conditions of flow, width, and depth preclude primary contact recreational water uses and the propagation of a balanced population of aquatic biota." So an intermittent stream must be (1) naturally not perennial (2) unable to support primary contact recreation and (3) unable to support a balanced population of aquatic life. This is undermined within the same section by the language: "such streams provide only an ephemeral, aquatic habitat which is not conducive to the establishment of a balanced population of aquatic biota or to recreational activities. Scientifically, a stream that exists in a relatively natural condition is considered biologically balanced. Therefore the phrase is confusing, unnecessarily repetitive, and can easily be read to short-circuit the appropriate test in the first sentence.	Medium Priority	This comment will be taken into consideration during the subsequent rulemaking.
Comment 11.C From TELC, submitted 9/21/2009	LDEQ must clarify §1111 definitions for primary and secondary contact recreation. Section 1111 contains broad language about activities which define the desired use category in which a water body belongs. The generalizations should be refined and clarified. Windsurfing and jet-skiing are activities that involve immersion in water. Therefore, these activities should be added to the list of primary contact recreation activities. Canoeing and ocean and freshwater flatwater kayaking should be added to secondary contact recreation.	No priority ranking necessary	Primary contact recreation is defined as "any recreational or other water contact use involving prolonged or regular full-body contact with the water and in which the probability of ingesting appreciable amounts of water is considerable." Secondary contact recreation is defined as "any recreational or other water contact use in which body contact with the water is either incidental or accidental and the probability of ingesting appreciable amounts of water is minimal." These

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			definitions are sufficient to describe each designated use. An example is a representation of a grouping and not intended as an all-encompassing list.
Comment 11.D From TELC, submitted 9/21/2009	LDEQ must clarify §1111 regarding limited aquatic life and wildlife use. Modify the sentence under *Fish and Wildlife Propagation* to read "Water bodies that might qualify for the *limited aquatic life and wildlife* use subcategory include intermittent streams and manmade water bodies with characteristics including, but not limited to, anthropogenic and irreversible: (1) hydrologic modification, (2) degraded water quality, (3) uniform channel morphology, (4) lack of channel structure, (5) uniform substrate, (6) lack of riparian structure, and (7) similar characteristics making available habitat for aquatic life and wildlife suboptimal." This would make it very clear that "anthropogenic" and "irreversible" applies not just to hydrologic modification and water quality, but to all the other characteristics that are listed. If a water body naturally has relatively uniform channel morphology, lack of uniform substrate, or is lacking of certain types of riparian vegetation, then it should not be classified as "limited."	Low Priority	This comment will be taken into consideration during the subsequent rulemaking.
Comment 11.E From TELC, submitted 9/21/2009	LDEQ should not use the same definition for water quality standards as for water quality criteria. The definition of "water quality standard" in §1105 is inconsistent with the CWA and ultimately less protective. The CWA states that water quality standards shall consist of "the designated uses of the navigable waters involved and the water quality criteria for such waters based upon such uses." Thus, a water quality standard has two components: (1) a designated use, and (2) a water quality criterion. This distinction is important because a state can change a designated use based on technical feasibility and economic or social impacts, but can only change a water quality criterion based upon science. LDEQ's definition of a UAA says that it can be used to revise water quality standards. It is true that a UAA can be used to revise designated uses, but since LDEQ defines water quality standards as criteria, this definition of a UAA is incorrect, as it cannot be used to revise criteria. LDEQ should redefine "water quality standard" to make it consistent with the CWA and include both the designated use component and the water	High Priority	EPA states that water quality standards consist of the following: designated uses of the water body; criteria to protect designated uses; antidegradation requirements to protect existing uses and high quality waters; and general policies to address implementation issues. The department will consider revising the definition.

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	quality criteria component.		
Comment 11.F From TELC, submitted 9/21/2009	Some provisions in the water quality standards properly belong in other parts of the regulations. LAC 33:IX.1109.C.1.e and LAC 33:IX.1109.C.2.d, which are essentially identical, discuss under what conditions wastewater discharges will be allowed into water bodies classified with an excepted use designation. This issue belongs in the regulatory sections on LPDES permits since it is a permitting issue. Also, §1109.D.1 discusses compliance schedules to be incorporated into permits, and properly belongs in the permitting sections of the regulations. Subsection 1109.I on sample collection and analytical procedures is a monitoring issue, not a water quality standard issue, and should be moved to the appropriate section of the regulations.	Low Priority	LDEQ adopts policies into the regulations that enhance and support the implementation of the water quality standards. This right is supported by the Water Quality Standards Handbook (Chapter 5), which states "States may, at their discretion, adopt certain policies in their standards affecting the application and implementation of standards. The policy regarding sample collection and analytical procedures assures data used for criteria development and assessment is of sufficient quality and quantity to make critical decisions. Although these are areas of State discretion, EPA retains authority to review and approve or disapprove such policies (see 40 CFR 131.13)."
Comment 11.G From TELC, submitted 9/21/2009	Provisions allowing for short-term exemptions from water quality criteria should be revised to only exempt certain permit provisions. The provision written in LAC 33:IX.1109.E is much too broad and vague to pass muster under the CWA. LDEQ should provide legal justification for allowing such an exemption. Additionally, if the intent of such an exemption is to provide a discharger specific waiver from otherwise applicable requirements, LDEQ should not and need not waive the underlying water quality criteria, but instead put a short-term waiver of the effluent limits into the permit. Otherwise, all sources to the applicable water body could increase their loads of the pollutants in question. This section should be changed to focus on permit conditions and removed from the water quality standard portion of the regulations to be placed into the permitting section.	Medium Priority	The comment will be taken into consideration during the rulemaking development process. If language discrepancies are found between LDEQ regulation language and the federal regulations, the department will rectify the discrepancies.
Comment 11.H	LDEQ's definition of water quality criteria is incorrect.	Medium	The department will take this comment

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From TELC, submitted 9/21/2009	LAC 33:IX.1113.A.1 states that, "Water quality criteria describe stream uses." This is incorrect. Criteria and uses are not the same. Water quality criteria describe the lowest level of water resource quality that is thought to be fully supportive of a given use. The provision should be deleted.	Priority	into consideration during rulemaking.
Comment 11.I From TELC, submitted 9/21/2009	LDEQ has no enforceable language regulating the designation of naturally dystrophic water bodies. In LAC 33:IX.1109.C.3 regarding the excepted use category of naturally dystrophic water bodies, LDEQ has no language similar to that for intermittent streams and man-made water bodies describing what water bodies under what circumstances will qualify for this excepted use. Paragraph 1109.C.3 refers to the procedure in the department's current Water Quality Management Plan/Continuing Planning Process. However, the volume of the WQMP/CPP that was supposed to contain the provisions does not exist. Therefore, the department has no enforceable rules regarding this often-used excepted use category. So any decision to classify a water body under this provision is arbitrary and capricious.	Medium Priority	This comment will be taken into consideration during rulemaking.
Comment 12 Lake Pontchartrain Basin Foundation (LPBF) - Theryn Henkel, Ph.D. Coastal Sustainability Program Project Manager	Wetland Assimilation Pre-Project Site Assessment LPBF would prefer to see more requirements for pre-project site assessment than are currently required. Detailed hydrologic studies should be required to adequately predict water flow from the discharge pipe across the project area under a variety of conditions, which include but are not limited to, the varying discharge points (if applicable), strong and sustained south winds, strong and sustained north winds. The hydrologic studies should assess whether significant pooling is likely in the receiving wetlands and whether the hydrologic period (depth, frequency and duration of flooding) will be changed in a way that prevents the wetland from drying out or causes sustained or permanent flooding. The site should also be assessed for short circuiting of treated sewage into nearby canals, at which time no assimilation occurs. Additionally, a proper reference site should be selected that closely mimics the treatment wetland.	High Priority	See Response to Comment #9.B.
Comment 13 Lake Pontchartrain Basin Foundation (LPBF) - Theryn	Wetland Assimilation Post-Project Assessment and Monitoring Stricter standards for monitoring assimilation sites need to be set by LDEQ. Sites should be monitored closely for performance of the wetland for nutrient assimilation using a sampling plan that meets scientific standards,	High Priority	See Response to Comments #4, 9.B, 9.C, and 9.D.

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Henkel, Ph.D. Coastal Sustainability Program Project Manager	includes replication and is proven that treated sewage water from the project actually flows towards or through sampling sites. A post-construction assessment of the hydrology should be required to ensure that the project is performing how it was predicted in the pre-project hydrologic assessment. Also, the threshold for the allowable amount of development of open water in the project area should be decreased. Allowing 20% vegetation loss is not acceptable when the justification for assimilation projects is they improve the health of struggling wetlands. In addition, the measurement and assessment of below-ground biomass should be required. Lastly, independent science for post-project monitoring should be required.		
Comment 14 Lake Pontchartrain Basin Foundation (LPBF) - Theryn Henkel, Ph.D. Coastal Sustainability Program Project Manager	Back-up Systems Back-up systems at the plant should be required where if a problem develops in the receiving wetland, the plant can treat to a level where they can discharge into a canal or can divert the water to a different wetland. Most wetlands systems are not permanently flooded and benefit from pulsed inputs of water. Constantly discharging water into the same wetland has a high probability to cause problems.	High Priority	LDEQ has a wetland assimilation workgroup currently reviewing the wetland assimilation program. The workgroup will review the topics, and any needed updates may result in revision to the wetland assimilation regulations, Volume 3 of the Water Quality Management Plan, or to both. Please note that some recent proposed projects have included alternative discharge paths to allow for adaptive management of the discharge into the wetlands. However, backup and/or alternative discharges may not always be practical, depending on the location of the assimilation site relative to other nearby waterbodies.
Comment 15 Lake Pontchartrain Basin Foundation (LPBF) - Theryn Henkel, Ph.D. Coastal Sustainability	LPBF would like to be involved in the development of new criteria for wetlands assimilation projects.	No priority rating necessary	The department appreciates the interest and will take this comment into consideration.

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Comment 16 Philip A. Crocker Chief Watershed Management Section (6WQ-EW)	EPA recommends review of the Louisiana aquatic life criteria in Table 1 and Table 1A, and adoption and updates to these criteria as appropriate to reflect the most current CWA §304(a) national criteria recommendations and recalculation procedures. Updated guidance was published for recalculation of aquatic life criteria, as part of the implementation tools released at the same time as the 2013 ammonia document. EPA strongly recommends the state adopt these criteria. EPA anticipates the publication of updated recommendations for selenium aquatic life criteria in 2016 and will provide the documents as soon as they are available, for consideration in revisions of the Louisiana standards. The enclosed tables reflect the changes needed to update the Louisiana Water Quality Standards to current §304(a) criteria, with the exception of cadmium, which has recently been updated. EPA strongly recommends the state change criteria to reflect current national recommendations for cadmium. The state is reminded that, per revised regulations (§131.20(a)), LDEQ is obligated to provide rationale should they choose to not adopt current §304(a) criteria.	High Priority	The department will review and update as necessary the aquatic life criteria.
Comment 17 Philip A. Crocker Chief Watershed Management Section (6WQ-EW)	Careful review of nutrient policies, criteria and implementation is needed and strongly encouraged. EPA recommends careful review of the antidegradation policies, and requests the existing policy be updated to reflect current federal guidance and provide clarification where needed.	High Priority	LDEQ will review and revise as necessary the regulations to reflect agreement with the federal regulations.

Appendix C

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1.	Correct designated uses on Georgetown Reservoir.	When Georgetown Reservoir was split off of the parent subsegment, Little River, the designated use of Outstanding Natural Resource Water (ONRW) was mistakenly carried over as a designated use. The ONRW designated use is for Little River that is also described as "scenic." The use designation of ONRW is specifically for the named waterbody and not to their tributaries or distributaries unless so specified. Table 3 in §1123 will be corrected to reflect that Georgetown Reservoir, Subsegment 081601-556716, is not an ONRW.
2.	Correct spelling of Bayou Petit/Bayou Pettit.	The spelling will be corrected.
3.	Combine subsegments 090205 and 090206 into one subsegment and correct descriptions.	This issue is under discussion and may be considered during the development of the rule.
4.	Correct subsegment boundary, 050101 and 050201.	The boundaries and descriptions will be reworked.
5.	Reference needs to be corrected in §1113.B.12.a.	The reference will be corrected.
6.	Revise description for Bayou Du Large, subsegment 120506.	The description will be revised to accurately reflect the subsegment situation.
7.	Correct several other needed edits in §1123 Table 3.	During rule development Table 3 will be closely reviewed by the workgroup to identify and rectify necessary edits.
8.	Revise language in §1115.C.4 (last sentence) to EPA's recommended language. "A mixing zone shall not include any public or private water supply intake(s).	The language will be revised.
9.	Correct the equations in Table 1A, cadmium and lead.	Table 1A will be corrected.
10.	• **§1105** – *Brackish Water, Fresh Water, and Marine Water* – possibly remove "(creeks, bayous, rivers, lakes, estuaries)" – need to further evaluate impact on use of brackish later in the regulations.	This issue is under discussion and may be considered during the development of the rule.
11.	• **§1105** – *Fresh Water* – possibly remove "(creeks, bayous, rivers, lakes)" – need to further evaluate (note – potential existence	This issue is under discussion and may be considered during the development of the rule.

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	of fresh water estuaries in Atchafalaya coastal areas)	
12.	• **§1105** – *Estuary* – possibly update definition (and evaluate use of "estuarine").	This issue is under discussion and may be considered during the development of the rule.
13.	• **§1109.A.1** - update antidegradation policy language to include analysis of alternatives requirements (should be minor updates to §1109, and possibly §1119.C – but not sure the latter needs to be revised since it references procedures in §1109).	Language will be revised as necessary for compliance with federal regulations.
14.	• **§1109.C.3** - undo WP046 (add extended sections back to regulations for Naturally Dystrophic Waters); WP046 was never approved by EPA (additionally, there were proposed WQMP updates that covered DO criteria development methods that are not appropriate anymore since ecoregion/MOA process is used).	This issue is under discussion and may be considered during the development of the rule.
15.	• **§1109.D** – does any of the variance language need to be updated based on new federal WQS regulations? • **§1109.E** – re-evaluate the last sentence "No short-term activity authorization …." For further discussion.	Language will be revised as necessary for compliance with federal regulations.
16.	• **§1111** – possibly update Oyster Propagation to Oyster Harvesting (or something similar). Oyster harvesting waters change over time and are primarily regulated by LDWF and LDHH. EPA has not allowed LDEQ to change this designated use because they have claimed it is a CWA 101(a) use and make their determinations based on the definition of "existing use."	This comment was discussed and no action will be taken during this subsequent rulemaking.
17.	• **§1113.B.9.a** – remove sentence "Turbidity shall not significantly exceed background; …" The department has not determined natural background conditions and for assessments the criteria in 1113.B.9.b is used.	This comment was discussed and no action will be taken during this subsequent rulemaking. This comment may be further investigated with the ONRW issue.
18.	• **§1113.B.9.b.v** - possibly remove "scenic"	This comment was discussed and no action will be taken during this subsequent rulemaking.

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19.	• **§1113.B.9.b.vi** – re-evaluate need for last sentence – "This shall not apply to designated intermittent streams." It possibly means no turbidity criteria apply to intermittent streams – but is it needed? Or possibly remove the term "designated"	This will be discussed during the development phase of rulemaking.
20.	• **§1113.B.12.b** – suggest updating title - "~~Assessment of~~ Biological Integrity for Wetlands"	This is under discussion in the wetlands workgroup.
21.	• **§1113.C.3** – re-evaluate need for or possibly re-word "(for a few hours each day)"	This will be discussed during the development phase of rulemaking.
22.	• **§1113.C.5.a** – possibly remove last sentence in paragraph, "During the non-recreational period of November 1 through April 30, the criteria for secondary contact recreation shall apply." This has been misinterpreted and is not needed.	This will be discussed during the development phase of rulemaking.
23.	• **§1113.C.5.d** – suggest removing "(MPN)" – although these criteria are based on Louisiana shellfish regulations (LAC 51, Part IX) that still reference MPN methods, LDEQ's ambient monitoring program does not limit sampling and analysis to the MPN methods.	This will be discussed during the development phase of rulemaking.
24.	• **§1113.C.6** – Toxic Substances o are any exposure assumptions for the human health criteria being updated (based on EPA's updated recommendations)? o Any updates to aquatic life criteria (cadmium, copper)? o Will ammonia criteria be adopted? o Table 1A – fix typo in formula for freshwater cadmium and lead criteria (last part of equation should not be part of exponent).	The toxics are under review and revisions, as needed, will be included in the subsequent rulemaking.
25.	• **§1115** – for wetlands, are critical flows or other "mixing zone" policies needed – for example, should incorporate minimal/general distribution system requirements be incorporated into the regulations?	A wetlands workgroup was established in 2016 which meets regularly. This workgroup will be responsible for any revisions to the wetlands WQS language. This will be a separate rulemaking effort and not part of the TR rulemaking.

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26.	• **§1119** – might need to add requirement for analysis of alternatives to this section; however, in §1119.A.1, §1109.A is cited as outlining methods the state uses to protect waters (so might not be needed, as stated above).	This is under review and revisions, as needed, will be included in the subsequent rulemaking.
27.	• **§1119.B.2.e** – possibly remove "…and protect state waters from degradation." Degradation can be allowed if analysis of alternatives is conducted and socioeconomic justification provided. Also, are there LPDES regulations that need to be cited along with LAC 33:IX.301.D and E?	This is under review and revisions, as needed, will be included in the subsequent rulemaking.
28.	• **§1123 Table 3** o **050101 and 050201 –** refine subsegment boundaries and/or update descriptions o **081601-556716 –** fix typo – remove "G" from designated uses o **090202-5126** Morgan River – absorb into **090202** West Pearl River and name Morgan River in WPR description – should be doable since criteria are same. o **090205** Wilson Slough and **090206** Bradley Slough – incorporate into **090201** West Pearl River - separate effort likely since minerals criteria less stringent for West Pearl – could be done after minerals criteria are updated. o **090207-5112** Morgan Bayou – absorb into **090207** Middle Pearl River – they have the same criteria so should not be an issue. not sure why Morgan Bayou was carved out – possibly confused with Morgan River (scenic) – or was it Scenic in the past and the scenic was repealed? o **120506** – update description and/or refine boundary – don't rely on *Mission* as landmark. o **ENDNOTES** ▪ should "scenic" be changed to	• **§1123 Table 3** o Boundaries for subsegments, 050101 and 050201, are under review. o For subsegment 081601-556716, the ONRW designated use will be reconciled. o The boundary and description for subsegment 090202-5126, Morgan River, is under review. o As a separate issue, subsegments 090205 and 090206 (Wilson and Bradley Sloughs, respectively) are under review. o The boundary for subsegment 090207-5112, Morgan Bayou, is under review. o The boundary and/or description issue for subsegment 120506, Bayou Du Large, will be reconciled. o Table 3 ENDNOTES will be reviewed and revised, as necessary, during rule development.

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	"ONRW"? ▪ Remove "[9]" from subsegments 040401 and 040403 and update footnote [9] since the site specific criteria were revised based on the ecoregion protocols (dependent on EPA's decision on eLMRAP?)	
29.	Correct delineations on subsegments, 100902 and 100903.	Boundaries for subsegments, 100902 and 100903, are under review.
30.	Complete review of Table 3 ENDNOTES	During rule development the workgroup will review and revise as necessary Table 3 ENDNOTES.
31.	Review of each subsegment boundary and description	The review of each subsegment boundary and description is currently in progress.
32.	Review and revise turbidity criteria	During rule development turbidity criteria will be taken under consideration.